

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P589148

Luminaire Tested: **FMR-24-2-LD4-2LO-50-UNV-80-97-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589148  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/8/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FMR-24-2-LD4-2LO-50-UNV-80-97-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

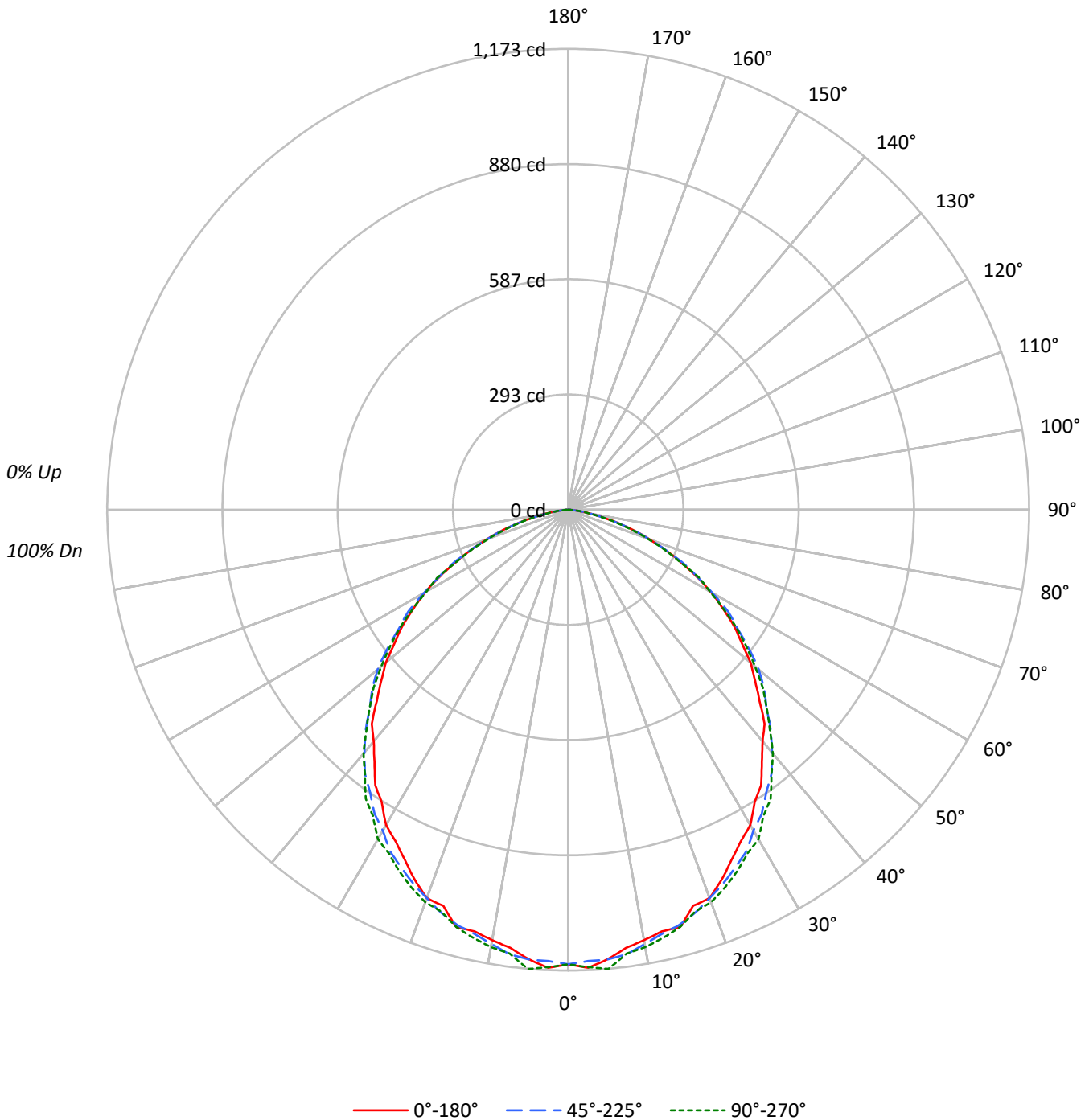
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2916.0 lumens  
Efficiency: N/A  
Efficacy: 124.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3113	3113	3113
5°	3103	3104	3170
10°	3040	3067	3089
15°	3064	3048	3065
20°	3013	3013	3045
25°	2920	2984	3017
30°	2880	2930	3008
35°	2812	2886	2950
40°	2702	2833	2845
45°	2621	2714	2718
50°	2535	2649	2599
55°	2415	2462	2445
60°	2258	2281	2240
65°	2014	2065	1999
70°	1728	1733	1685
75°	1368	1365	1312
80°	917	891	857
85°	497	494	460



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.8	3.7
10°-20°	308.4	10.6
20°-30°	462.1	15.8
30°-40°	547.7	18.8
40°-50°	548.7	18.8
50°-60°	465.8	16.0
60°-70°	314.0	10.8
70°-80°	138.0	4.7
80°-90°	22.4	0.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	879.4	30.2
0°-40°	1427.1	48.9
0°-60°	2441.6	83.7
0°-90°	2916.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2916.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1157	1157	1157	1157	1157	
5°	1149	1146	1149	1146	1173	108
15°	1100	1087	1094	1100	1100	306
25°	983	989	1005	1018	1016	455
35°	856	858	878	899	898	531
45°	689	702	713	732	714	533
55°	515	511	525	521	521	458
65°	316	312	324	312	314	315
75°	132	129	131	122	126	141
85°	16	16	16	16	15	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1157.0	1157.0	1157.0	1157.0	1157.0
2.5°	1167.0	1158.2	1150.0	1159.5	1165.4
5°	1148.8	1146.1	1149.2	1145.8	1173.4
7.5°	1125.2	1135.5	1141.5	1137.7	1139.4
10°	1112.6	1109.0	1122.3	1131.6	1130.3
12.5°	1099.2	1104.6	1105.3	1115.3	1116.2
15°	1099.9	1087.2	1094.0	1099.6	1100.1
17.5°	1057.2	1070.9	1075.6	1088.6	1072.4
20°	1052.0	1042.0	1052.0	1065.3	1063.2
22.5°	1019.9	1008.7	1030.2	1042.0	1041.2
25°	983.4	988.8	1004.9	1018.1	1016.0
27.5°	951.4	957.7	980.7	998.8	987.1
30°	926.8	923.7	943.1	959.2	968.2
32.5°	882.7	894.1	916.8	932.8	924.3
35°	856.0	858.5	878.4	898.7	898.1
37.5°	809.2	821.0	849.0	854.6	849.4
40°	769.3	781.1	806.4	812.5	810.0
42.5°	739.9	742.0	763.7	770.7	759.5
45°	688.7	701.5	713.2	731.5	714.2
47.5°	645.0	651.0	676.1	681.1	671.9
50°	605.5	607.6	632.8	626.7	620.7
52.5°	555.7	564.5	578.7	577.5	570.5
55°	514.8	511.3	524.8	521.2	521.1
57.5°	465.6	471.6	482.7	477.0	467.9
60°	419.6	419.8	423.8	417.4	416.2
62.5°	368.4	370.2	371.1	363.2	376.0
65°	316.3	312.1	324.3	311.9	314.0
67.5°	268.3	270.4	269.2	261.4	264.4
70°	219.6	222.3	220.3	211.5	214.2
72.5°	175.1	171.8	173.9	162.8	167.9
75°	131.6	128.9	131.3	122.0	126.2
77.5°	89.6	91.7	90.2	85.3	88.1
80°	59.2	57.5	57.5	54.7	55.3
82.5°	34.5	32.9	32.4	31.5	32.9
85°	16.1	15.7	16.0	15.5	14.9
87.5°	5.8	6.0	6.0	5.7	5.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)